

REMARKS

Claims 1-4, 7-15, and 18-20 are all the claims pending in the application, claims 5, 6, 16 and 17 having been canceled in previous amendments.

Claims 1-4, 7-15, and 18-20 stand rejected under 35 U.S.C. §102(b) as being anticipated by Sgroi (U.S. patent no. 5,357,048). Applicant respectfully traverses these rejections, and requests reconsideration and allowance of the pending claims in view of the following arguments.

Rejection Under 35 U.S.C. §102(b)

Independent claims 1 and 2 are respectively directed to a system and method for generating outgoing real-time digital controls signals and recite the use of at least one control signal generator for generating outgoing real-time digital controls signals. In these claims, the control signal generator may be a low frequency oscillator (LFO) or a transient generator (TG). In the Office Action, the Examiner indicated that processor 62 of Sgroi teaches an LFO and TG, but Applicant respectfully disagrees.

Applicant's review of Sgroi finds "processor 62 implements a series of subroutines which convert Events into MIDI commands," but lacks any mention of a LFO or TR as recited in claims 1 and 2. (Sgroi col. 5, lines 1-2). For example, processor 62 of Sgroi operates on each incoming event separately, as shown in the drawings spanning figures 7a and 7b. Various subroutines that may be implemented by processor 62 are depicted in figures 8-10. Applicant's review of these figures finds that Sgroi simply provides a series of routines providing randomizations of incoming signals by substituting some or all of the incoming signal data based upon randomly selected entries in a lookup table. However, Sgroi simply does not teach, suggest, or even mention the use of an

LFO or TG as a control signal generator for generating outgoing real-time digital control signals, as recited in claims 1 and 2.

In view of the foregoing, Sgroi fails to teach or suggest at least one feature recite in independent claims 1 and 2 and therefore these claims are believed to be patentable. Applicant further submits that claims 3-4 and 7-14 are patentable at least by virtue of their dependence on the patentable independent claims. However, Applicant further provides the following comments.

In the Office Action, the Examiner asserted that Sgroi discloses outgoing real-time digital control signals in MIDI form, thus teaching the invention recited in claims 13 and 14. Applicant respectfully points out that while claims 3 and 4 recite “outgoing MIDI control signals,” claims 13 and 14 recite the use of incoming control signals comprising MIDI messages. Thus, even if Sgroi teaches the generation of “outgoing” MIDI control signals, it does not teach or suggest the use of incoming “MIDI messages.”

Applicant acknowledges that figure 3 of Sgroi depicts the use of an incoming “MIDI signal,” but these incoming MIDI signals are not directed to the Sgroi control signal generator. To the contrary, Sgroi provides the figure 3 illustration to show a conventional sound generator system which can receive MIDI input generated by the MIDI controller of figure 4 (Sgroi col. 3, lines 28-57). Simply put, the “incoming MIDI signals” of figure 3 is the output of the Sgroi processor 62 of figure 4. The teachings of Sgroi simply relate to the generation of MDI output signals, but this reference lacks any discussion, whatsoever, on the use of incoming control signals comprising MIDI messages, as recited in claims 13 and 14. Accordingly, claims 13 and 14 are believed to be patentable for these additional reasons.

Independent claim 15 recites the generation of outgoing digital control signals based upon a non-merging combination of a first and second incoming control signal. This claim further recites that the first and second incoming control signals comprise MIDI messages.

Applicant's review of figure 4 of Sgroi finds that scanner 54 merges control signals into a merged event list 58, which is then presented to processor 62. As previously discussed, processor 62 operates on each event separately, and then transmits each of the results into a common, merged MIDI output stream 66. Consequently, Sgroi only provides teachings relating to the merging of incoming control signals and therefore cannot teach or suggest the generation of outgoing digital control signals based upon a non-merging combination (e.g., multiplication, addition, etc.) of first and second incoming control signals, as recited in claim 15.

A further distinction is that, as demonstrated in the claim 13 and 14 argument presented above, Sgroi does not teach or suggest incoming control signals that comprise MIDI messages. Sgroi merely provides "outgoing" MIDI signals, but lacks any teachings relating to the use of incoming control signals comprising MIDI messages. In view of the foregoing, independent claim 15, as well as dependent claims 18 and 19, are also believed to be patentable.

Independent claim 20 includes the generation of an outgoing real-time MIDI control signal using one or more message conversion methods. In this claim, incoming MIDI control signals are changed into outgoing MIDI control signals that are of a different type than the incoming signal. For example, an incoming MIDI note number value is changed to a MIDI continuous controller value; an incoming MIDI note velocity value is changed to a continuous controller value; an incoming MIDI continuous controller value is changed to a MIDI note value, and so on. The message conversion method of this claim therefore receives an incoming MIDI

control signal of a particular type (note number, note velocity, continuous controller, etc.), and then generates an outgoing real-time MIDI control signal that is of a different type.

Applicant review of the cited portions of Sgroi reveals that this reference may describe the processing of control signals such as note number signals, velocity signals, and continuous controller signals. However, the processing provided in Sgroi does not change the type of signal processed; note number signals remain note number signals; velocity signals remain velocity signals, and so on. Although the Sgroi system changes the value of various types of control signals, this reference does not teach or suggest the changing of the type of signal using any of the methods recited in claim 20 and as such, this claim is also believed to be patentable.

CONCLUSION

The Examiner's rejections having been overcome, Applicant submits that the subject application is in condition for allowance. Should any issues remain unresolved, Examiner Fletcher is invited to telephone the undersigned attorney.

Respectfully submitted,

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